

THE ATOM

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THE ATOM

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COVER:

The cover photograph is of what might be called a "seasonal" waterfall since it is dependent mostly on spring runoff. From the rim to the floor of Los Alamos Canyon, near White Rock, the waterfall consists of five stages, three of which can be seen in the cover photograph taken by Bill Jack Rodgers, ISD-7, in response to a tip from John Savage and Ed Tucker, both of ENG-7.

Recycling LASL Computer Paper

Rather than discarding unclassified computer-printout paper and cards, the Los Alamos Scientific Laboratory is cooperating with an Albuquerque paper company and a group of Los Alamos Explorers to have the paper recycled.

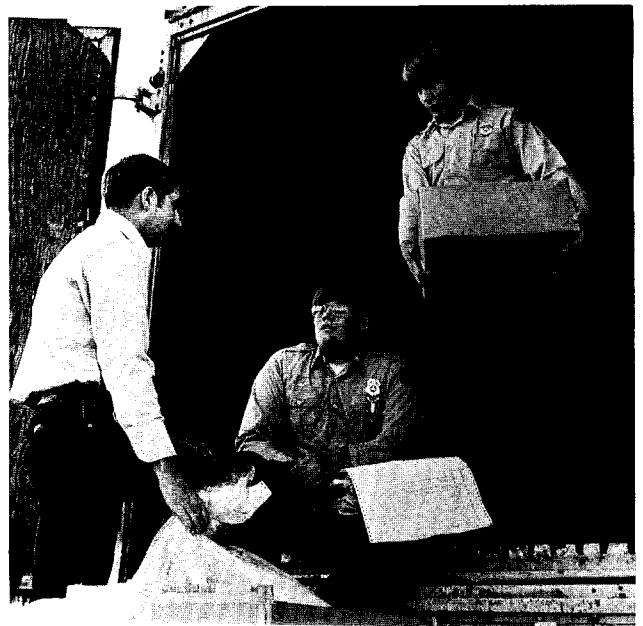
Efforts to establish the project, now in its second month of operation, began about a year ago in LASL's Supply and Property Department. "The Laboratory generates a lot of unclassified computer paper," said Robert Van Gemert, head of the Supply and Property Department, "and it seemed reasonable to assume that we could have it recycled. Ecologically, our intentions were good, but for a while there seemed to be no way of having it recycled. We contacted paper companies in Denver and Albuquerque, but apparently Los Alamos is too far out of the way to interest any of them in making regular pickups.

"We finally came upon the idea that maybe a scouting group would be interested in collecting and selling the paper as an ecology project. And, sure enough, an Explorer group, sponsored by the Los Alamos Police Department, agreed to it."

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Post 104 Explorers Bob Sullenburger and Kevin Johnson stack paper in a semi-trailer, located at the Los Alamos Scientific Laboratory by the Albuquerque Paper Stock Company.





Left, Sullenburger and Post Advisor Greg McEwen, a member of the Los Alamos Police Department, load computer paper at a collection point near the Administration Building. In background is Tom Mannon, SP-DO, who helped coordinate the paper-recycling project. Above, McEwen talks with Explorers Stuart Wageman and Dick Bjarke. Below, paper collected at various points at the Laboratory is loaded into the semi-trailer.

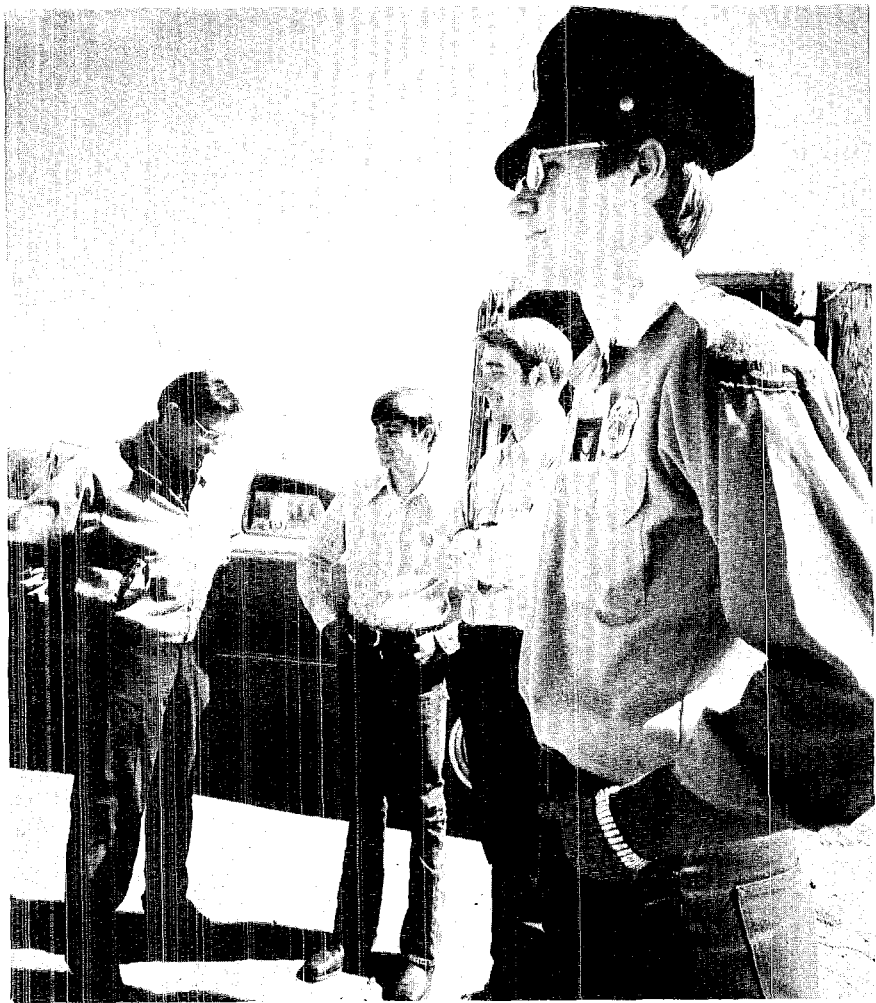


The Explorers are members of Post 104, which specializes in law enforcement training. "We try to train the scouts to qualify to ride with an officer," said Gregory McEwen, a member of the Los Alamos Police Department, who along with Patrolman Tom Pursell, serves as an advisor to the post. "The Explorers receive instructions in traffic control, some investigation, transmitting and receiving radio messages and first aid.

"The recycling project is a real opportunity for Post 104 because there is a fair amount of money involved that they can put to good use in supporting some of their 'super' activities. These are the extra things that Explorers enjoy when the opportunity exists, and it includes the new pistol team that has been formed for them."

Arrangements to begin the project were coordinated by Tom Mannon, SP-DO, and Ted Bayhurst, ENG-4. Explorers who would be involved had to have security clearances before they would be allowed to enter restricted areas to collect the paper. Collection points had to be established that would be centrally located among facilities where the paper is generated, and Laboratory personnel had to be informed of the system devised to deliver the paper to these collection points. In addition, storage and transportation of the paper had to be negotiated with a paper company.

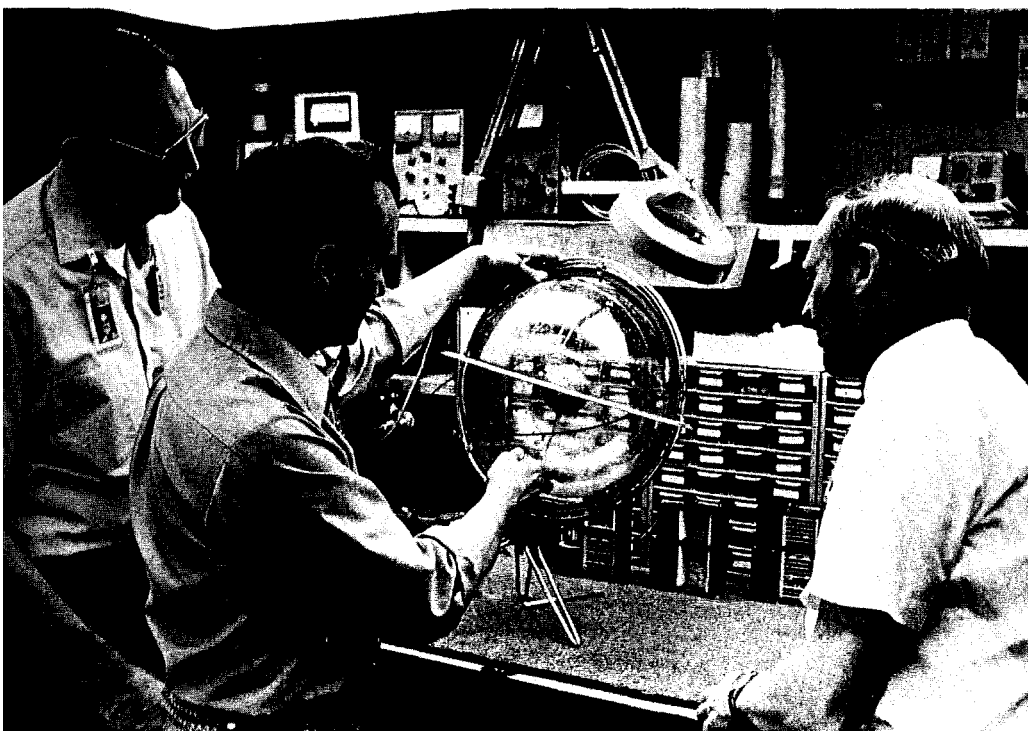
Security clearances were received by McEwen, Pursell and five Explorers—Stuart Wageman, Bob Sullenburger, Carl Miller, Dick Bjarke and Kevin Johnson. Using their personal vehicles, members of Post 104 pick up paper gathered at various collection points in accordance with a predetermined plan. "Members of the Laboratory groups, concentrated where fairly large volumes of printout paper and cards are generated, place this paper in their hallways and mark it 'To Be Recycled'," said Mannon. "The Janitors pick it up and take it to a collection point. In areas



where lesser amounts of paper are generated, other arrangements have been made to get it to a collection point at the convenience of the people who work there. The paper that is picked up by the Explorers at the various points is loaded into a semi-trailer located at the Laboratory by the Albuquerque Paper Stock Company. The company periodically brings an empty trailer to LASL and takes the other one, loaded with paper, to Albuquerque. Payment is made by the company directly to the Explorer Post.

"With very little effort and little or no cost, the Laboratory is attempting to set an example for recycling rather than to waste literally tons of paper each year. At the same time, the Laboratory is supporting some of the young people of Los Alamos."

Robert Van Gemert, Supply and Property Department head, talks with Johnson, McEwen and Sullenburger following an orientation of paper-collection points at the Laboratory. Sullenburger is wearing the distinctive uniform of Post 104, whose members specialize in law enforcement training.



On a transparent astronomical globe, Roy Olsen, Ray Klebesadel and Ian Strong attempt to pinpoint the probable location of a recent gamma-ray burst in space.

world's foremost authorities on supernovae, predicted that x and gamma radiation in intense bursts would occur at the moment of the violent stellar collapse. These intense bursts would not be observable until a few million years later. This is because the explosion may have occurred so far out in space that the radiation, traveling at the speed of light, takes a few million years to reach our solar system.

"We believe our observations may confirm this prediction," Klebesadel said. "If this is a supernova then it is detailing the event at the instant of formation."

The ability to observe and study the formation of supernovae in more detail can open the way toward increased understanding, not only of a variety of astronomical problems, but, of such earth-bound scientific phenomena as shock waves, extremely high-temperature explosions and controlled thermonuclear reactions.

The discovery came about largely

Discovery--Through Vela's Eyes

Astrophysicists around the world are welcoming news of the first observations of short-duration pulses of high-energy, electromagnetic radiation originating beyond the solar system. Short bursts of photons, in the energy range of 0.2 to 1.5 million electron volts, recorded by simple cesium-iodide, gamma-ray detectors aboard four Vela satellites, have been reported by Ray Klebesadel, Ian Strong and Roy Olsen, all of Group P-4 at the Los Alamos Scientific Laboratory. Nineteen such bursts, lasting from less than a second to about 30 seconds, have been recorded in the widely-spaced satellites since 1969, one of them as recently as May 7.

"People have been studying gamma radiation from space for about 12 years," Strong said, "but this is the first time anyone has

looked for something that happens in a short time and then disappears. This is one of the most interesting discoveries in gamma-ray astrophysics to date."

Although explanations for the fluxes are varied and uncertain, Strong and Klebesadel find plausible evidence that the gamma-ray bursts herald the formation of a supernova, the catastrophic explosion of a dying star.

When its nuclear fires cool so that it can no longer support its own weight, a star will collapse—sometimes quietly, but sometimes in a spectacular explosion which radiates more energy than a billion suns and ejects debris at speeds up to the velocity of light. In 1968, Stirling Colgate, president of the New Mexico Institute of Mining and Technology and one of the

as spin-off from programmatic work designed to detect shielded weapons and weapons detonated behind the moon. Although searches of the data had been made, at the suggestion of Colgate and Edward Teller, near the times of the appearances of optical supernovae, the actual discovery was made while the investigators were reviewing their data for evidence of natural events that might stimulate the system and be misleading in the programmatic work.

The first event was identified in the data records in 1969, two years after it had occurred. "This was found by purely manual observation of the data and it was a single event that could not be verified," Klebesadel said.

Today the search is much easier and quicker. Although the same

detection system is used, data handling and timing have been greatly improved and the multiple satellite system now in use provides more complete information.

Unlike most detection devices used in gamma-ray astrophysics, the LASI detectors are simple, unsophisticated and non-directional. But, they are linked to some unusual computer equipment which recognizes and records the characteristics of the sudden short bursts of gamma rays. This feature, along with the capability of seeing in all directions all of the time for several years, and from several satellites simultaneously, combines to form a unique observation system. Ground-based optical and radio telescopes are limited to "seeing" only a tiny area of the celestial sphere. For this

reason, sudden short-duration phenomena are usually missed. Also, the earth's atmosphere is opaque to the gamma-ray component of the electromagnetic spectrum, and so, it can be seen only by observation stations above the atmosphere. The instruments were built by members of P-4 and Sandia Laboratories. Logics and electronics were designed and built by Sandia Laboratories and LASI Group E-4, which is led by Paul Glore. The detectors are mounted in groups of six on four satellites equally spaced in a circular orbit.

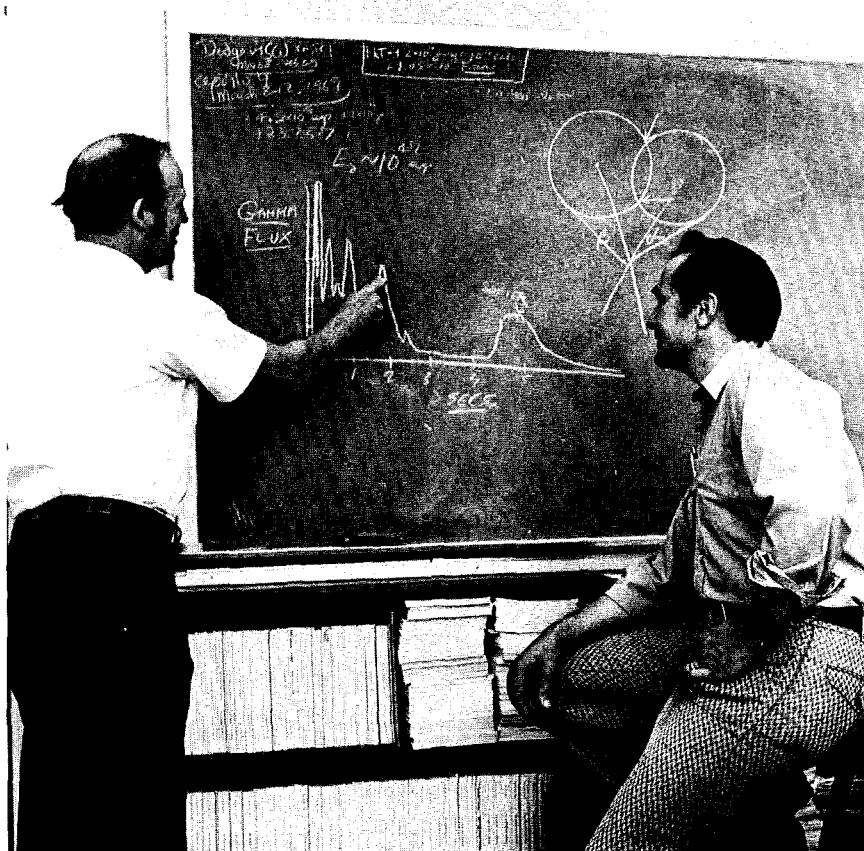
In order to qualify as an event of interest, at least two of the spacecraft must record the burst within eight-tenths of a second, or less, of each other. Nineteen events have met this criterion and at least two

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Stirling Colgate, second from left, predicted in 1968 that x and gamma radiation in intense bursts would occur at the moment a star collapses. Colgate, president of the New Mexico Institute of Mining and Technology, is shown here talking with Strong, Jerry Conner and Klebesadel about confirmation of his theory by Vela satellites.



Strong and Klebesadel discuss a typical example of a gamma-ray burst being recorded by the Vela system. Circles show how data is plotted to determine the source of gamma-ray bursts. The location is narrowed to the two points where the circles intersect.



Klebesadel and Olsen examine a type of detector used to observe gamma-ray bursts in space. In Klebesadel's left hand is the cesium-iodide crystal scintillator. In his right hand is the photomultiplier tube. The cylinder slips over the scintillator and tube. It offers some protection against background radiation.

have been recorded on all four satellites. The differences in time and the sequence in which the signal arrives at the satellites make it possible, in a number of cases, to narrow down the source of the signal to two areas—the actual position and its mirror image in the orbital plane of the satellite.

"This is an ambiguity that is usually unresolvable," Klebesadel pointed out. "A unique answer requires at least four satellites, one of which is in a different plane than the other three."

Such data has eliminated both the earth and the sun as possible sources. "Furthermore," Klebesadel said, "We have compared our data

with that from other Vela experiments designed especially for the sun and find the x-ray flares from the sun are very different." In none of the events was there any correlation with recorded indications of solar activity.

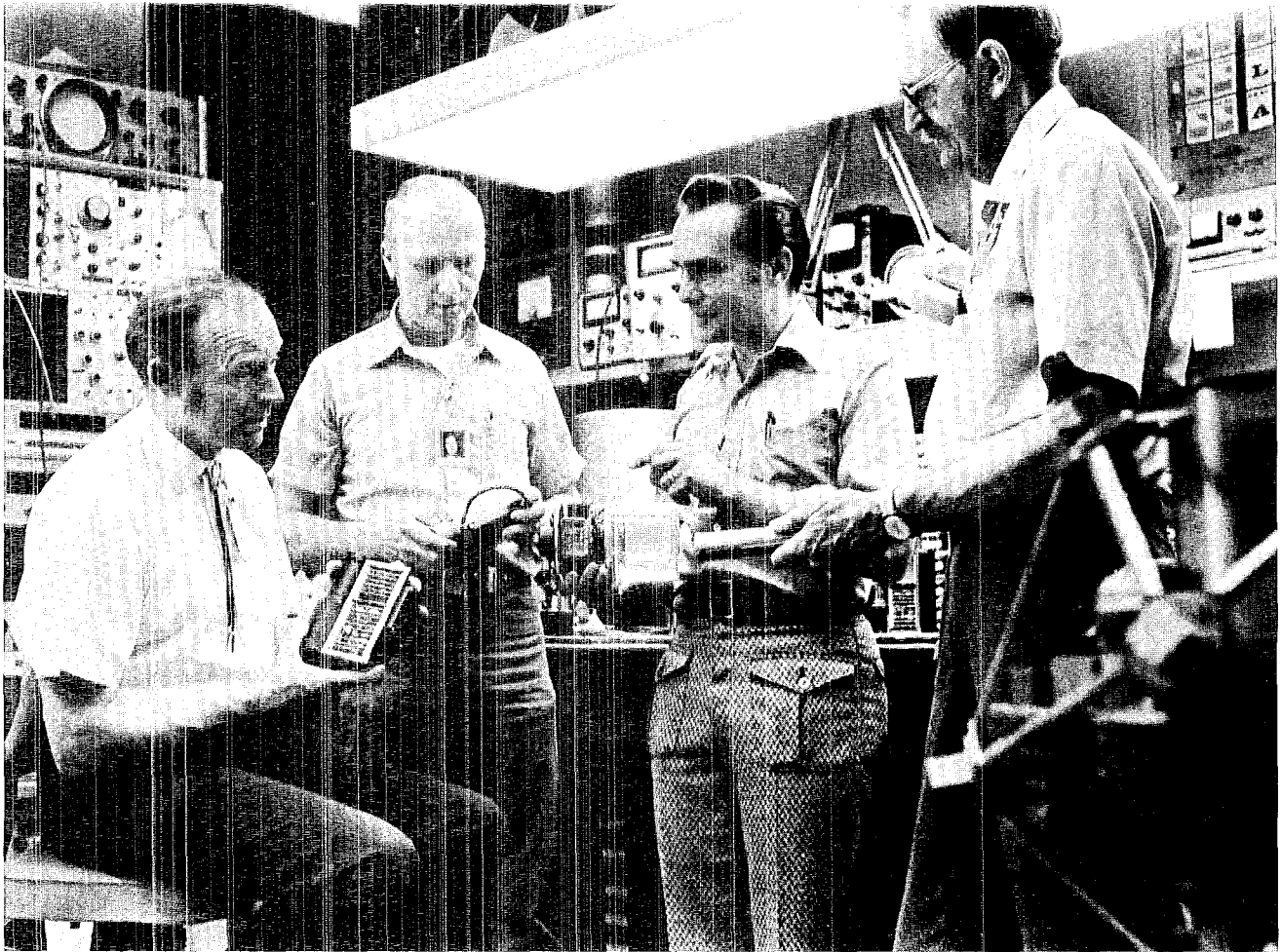
Using their knowledge of stellar history, astronomers have predicted that a supernova should occur once every 30 years in a typical galaxy. Actually, supernovae have been seen optically only once every 300 years per galaxy, although there are more remnants of supernovae than can be explained. Therefore, astronomers have long sought to explain why 90 per cent of the predicted supernovae appear to be

missing. The P-4 scientists may have an answer.

Supernovae that are visible on earth appear to be surrounded by an envelope of gas which may absorb the radiation emitted as the supernova forms and re-emit it as ultraviolet light.

"If only 10 per cent of the supernovae have the particular conditions that enable astronomers to see them optically," Strong said, "it may be that the other 90 per cent have no gas envelope so that the radiation goes out unchanged to the detectors."

"On the other hand," Klebesadel said, "we may be seeing more than one kind of thing and we also may



Gamma-ray detection systems change. Here, Strong, Walt Gould, Klebesadel and Olsen exhibit a variety of detectors. The latest, and still untried detector, is the 1973 model held by Strong.

be seeing something very different."


It has been suggested that the radiation bursts might also come from a neutron star at the moment it collapses into a "black hole." A neutron star is believed to be a superdense star composed mostly of neutrons left behind as the outer shell of a collapsing star is ejected in a supernova explosion. If the neutron star is extremely massive or if particles from neighboring stars fall into it, increasing its mass beyond endurance, the neutron star itself collapses into a black hole where the gravitational field is so strong that not even light can escape. Predictions are that bursts of radiation would be emitted and

detected at the moment of collapse.

In an effort to throw more light on the intriguing puzzle, Doyle Evans, Jerry Conner and Paul Higbie, all of P-4, together with Klebesadel, Strong and Olsen, are preparing a proposal to conduct further experiments in which the spectral resolution and time structure will be improved to provide more information about the exact energy pattern of the burst over shorter periods of time. "We're going to try to get these experiments on just about anything that flies," Klebesadel said.

Meanwhile, the LASI men are contacting scientists throughout the world, looking for data that may

correlate with that obtained from the Vela experiments. For example, within hours of the most recent (May 7) event, the P-4 team had notified radio astronomers and other investigators so that an intensive search could be made for corroborative evidence.

"A supernova takes a week to ten days to reach its brightest point," Strong said, "so we're hoping the other laboratories were able to spot it while it was still building. Of course, it may not be a supernova, but whatever it is, it's tremendously interesting. We won't find all we want to know with one experiment; it's going to take a lot of work by a lot of people." 

LASL's Casual Office Helpers



Florence Butler, a casual secretary, looks over her records with Pat Wittman, PER-1 personnel representative who has been responsible for administration of the pool of casual secretaries and stenographers at the Laboratory for about a year.

Administrative officials realized early in the history of the Los Alamos Scientific Laboratory that its divisions and groups would occasionally need some extra office help. Like other employees, secretaries and stenographers were taking vacations, terminating and, from time to time, they were being faced with inordinate work loads. To contend with these occasions, a pool was formed, consisting of a few casual secretaries and stenographers, whose members could fill in or supplement an office work force for short periods of time.

This pool now consists of 26 experienced secretaries and stenographers whose time is heavily committed to assignments ranging from two days to several months. "We receive about two requests every day," said Pat Wittman, a former member of the pool who is now the personnel representative in Group PER-1 responsible for its administration. "Many of these are emergency requests that we really can't do anything about. We need at least four weeks and preferably six weeks notice because the women in the pool are booked pretty far ahead.

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Sue Martin assumed secretarial duties in the CNC-Division office for vacationing secretary.

Elizabeth Fletcher, a casual secretary at LASL for more than 10 years, talks with Marianna Howenstine, PER-1. Miss Howenstine was in charge of the pool of secretaries and stenographers for 14 years.



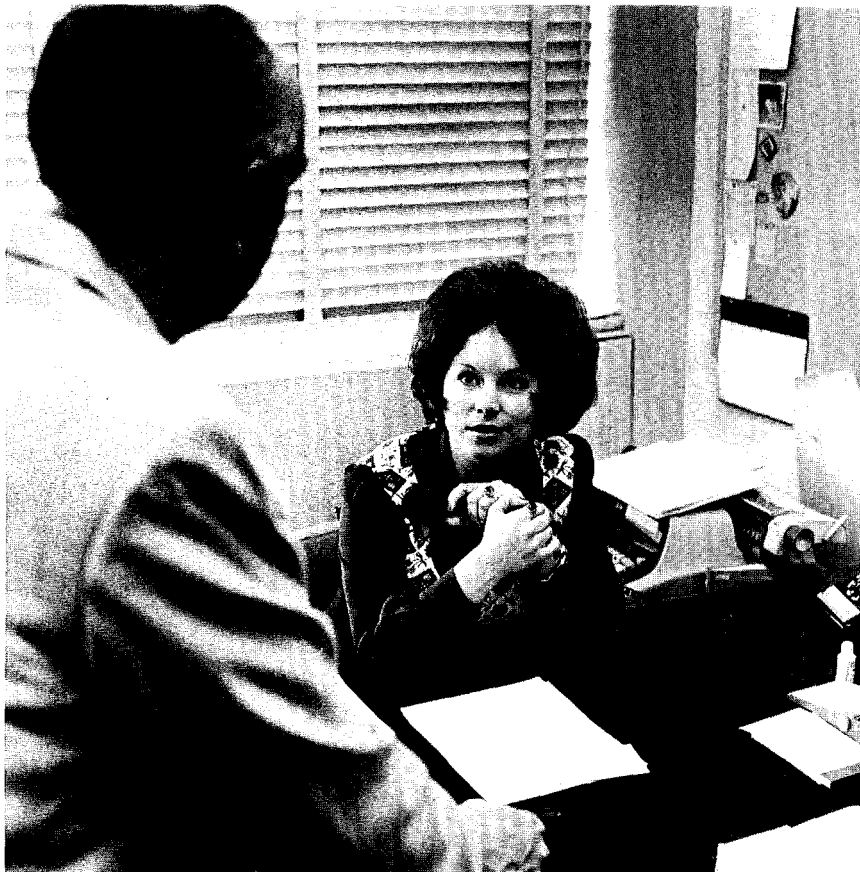
Otherwise, we just have to say, 'We're sorry.'

"We try to fill requests in the order that we receive them, although, there is an exception to the rule. When an office is without any clerical help, we'll try to give priority to that request over one that is for additional help. If someone is needed to replace a group secretary, we try to send a secretary. If we don't have a secretary, we send a stenographer. Members of the pool have some preferences too. For example, we have two who prefer assignments requiring technical typing. We also have two who dislike it very much.

"I've done a study, based on past usage, which shows that 65 per cent of the requests we get are for secretaries and 35 per cent for stenographers. We've never attained this balance. The secretary-stenographer ratio is about half and half now."

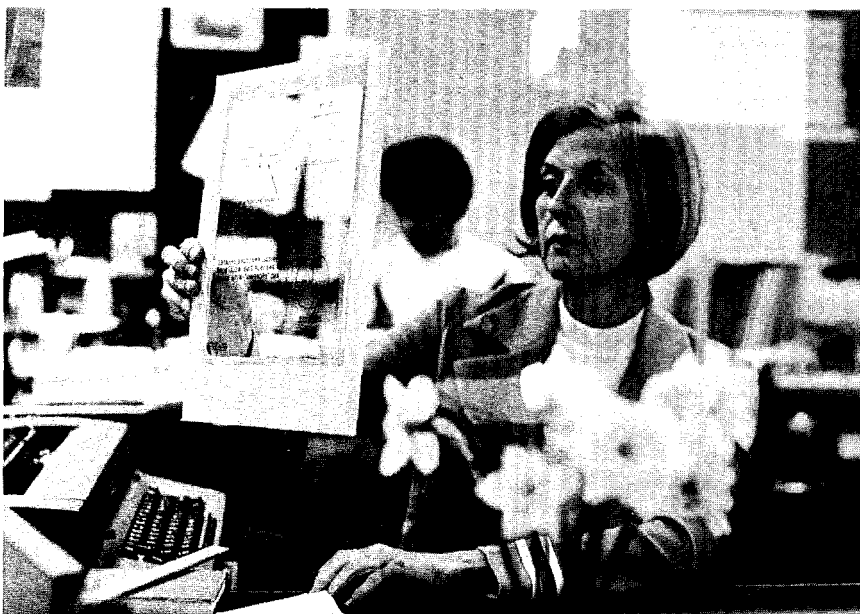
Mrs. Wittman noted that to be classified as a secretary, pool members must have at least three years of secretarial experience of which six months must be at LASL. "If a person has three years of secretarial experience somewhere else, she is classified as a stenographer until she accumulates six months of experience at the Laboratory. By the time she can be reclassified, she will know her way around the Laboratory pretty well and will be capable of substituting for a group secretary without a lengthy orientation."

There is a large turnover of employees in the pool, Mrs. Wittman said, noting that 16 transferred out of the pool in 1972, but it is not unexpected. "Some of them work casual while they are looking for a full-time job. We assign them all over the Laboratory. It gives them some exposure to the Laboratory and it gives the Laboratory some exposure to them. A lot of the women have worked full time before and just want more time at home with their families. They like to keep their hand in and their knowledge of LASL procedures current, but not on a 40-hour-a-week basis."

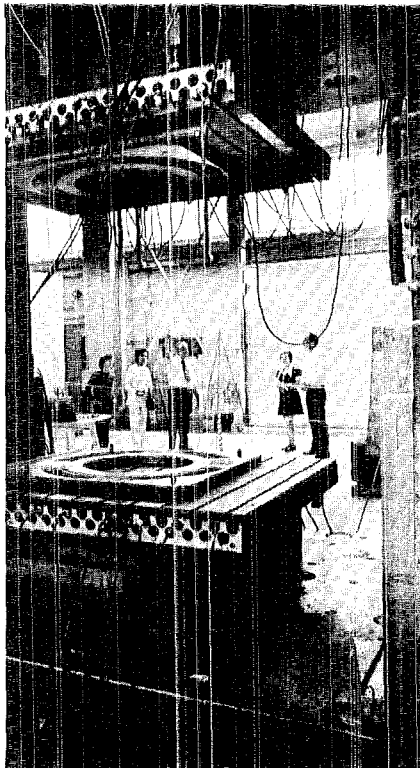


Anita Battat quizzes Bill Showers, PER-3, for an answer to a question from a telephone caller. Miss Battat worked full time in MP-Division, but now prefers casual office employment.

Jean Balagna provides some additional office help in the Group Q-23 office. She prefers technical duties over routine office work. In background is Q-23 secretary Dolores Apodaca.



LASL Family Days



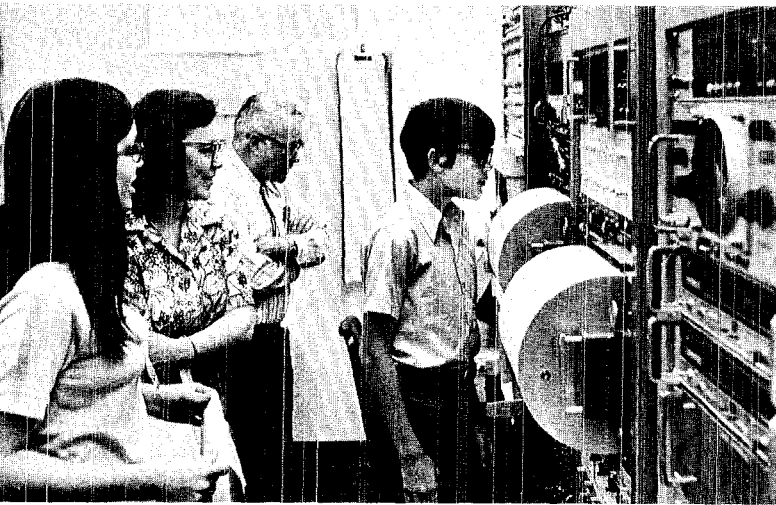
Viewing the CMB-6 5,000-ton hydraulic press are Rowdy Campbell, left, son of Steve Cushing, MP-8, and his wife, Shirley, CMB-6, at right, and Bob Riley, CMB-6, and his wife, Ruth.



Warren Wood, alternate CMB-14 group leader, and his wife, Edwina, watch as their children, Stacie and Steve, take turns at trying their skills at operating mechanical manipulators.

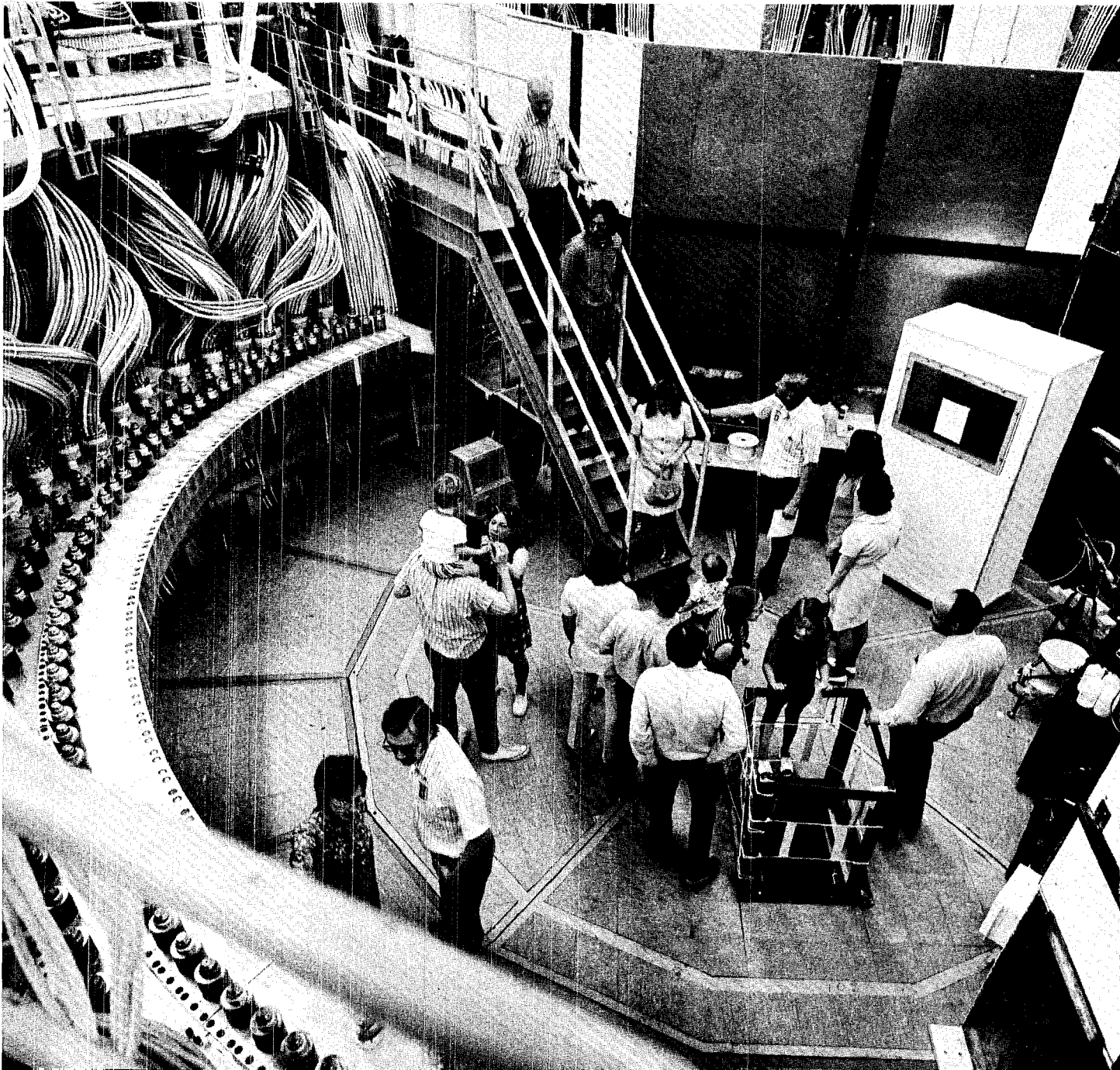


Mike Cates, J-12, carried his tired-of-walking daughter, Sarah.



Norma McFarland shows her parents, Mr. and Mrs. R. A. Lefever, and her brother, Allen, J-9 seismic experiment.

One of the most popular Family Days attractions was the Scyllac experiment, which is being built for controlled thermonuclear reaction research.





Above, Celedon Aragon, CNC-11, explains automatic beta counters to Bill Purtymun, H-8, Purtymun's wife, Elizabeth, and children, Kevin, Ann and Bill. Below, members of Henry Ortega's family look at Vu-Graphs in one of the ISD-7 laboratories. They are Ortega's daughter, Deborah, wife, Ruth, and sons, David and Mike.

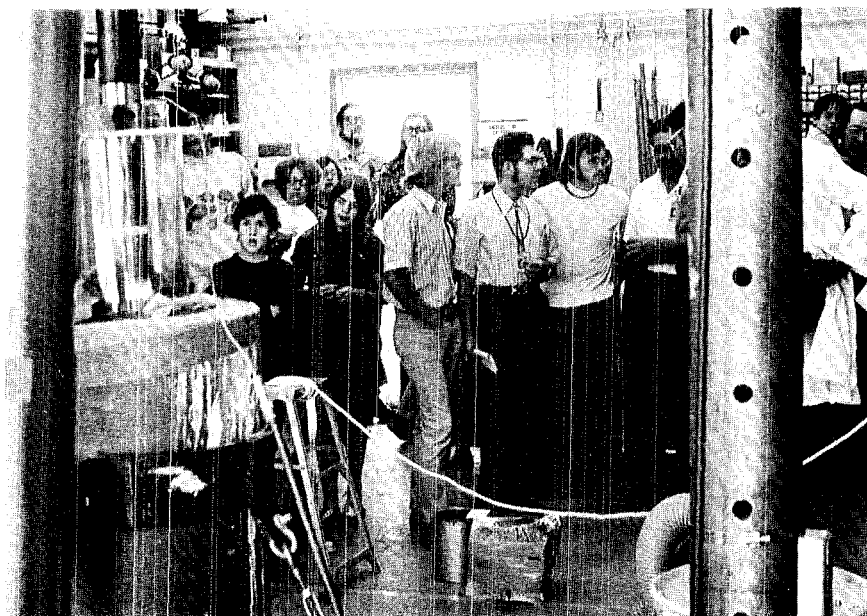
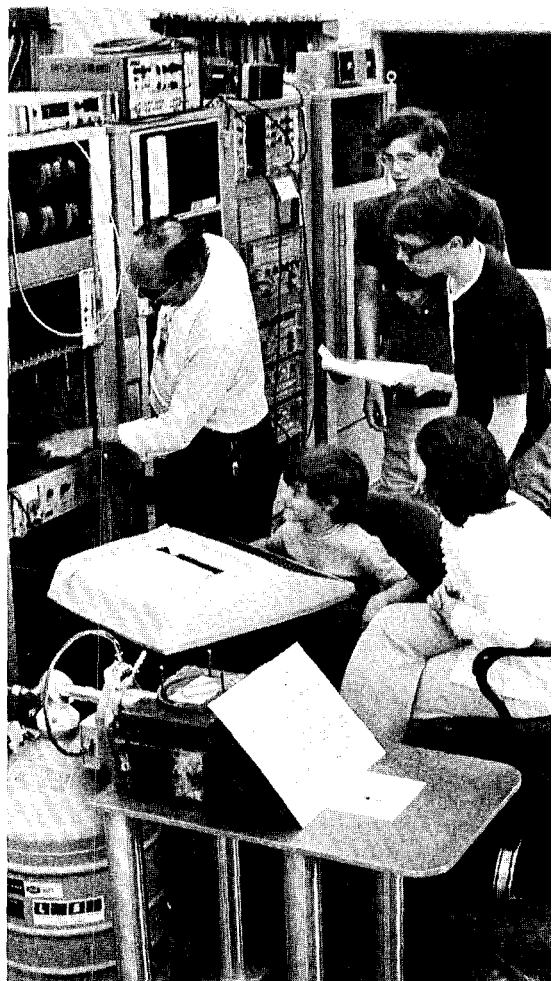


Above, Dick Morse, T-6, explains charts in his office to his children, Katie, Susan and John, his wife, Marjorie, and his grandmother-in-law, Olga Cochran. Below, LaVaughn Lundgaard and son, Kirk, look at a vacuum evaporator used by Group M-1 to prepare samples for scanning electron microscopy.

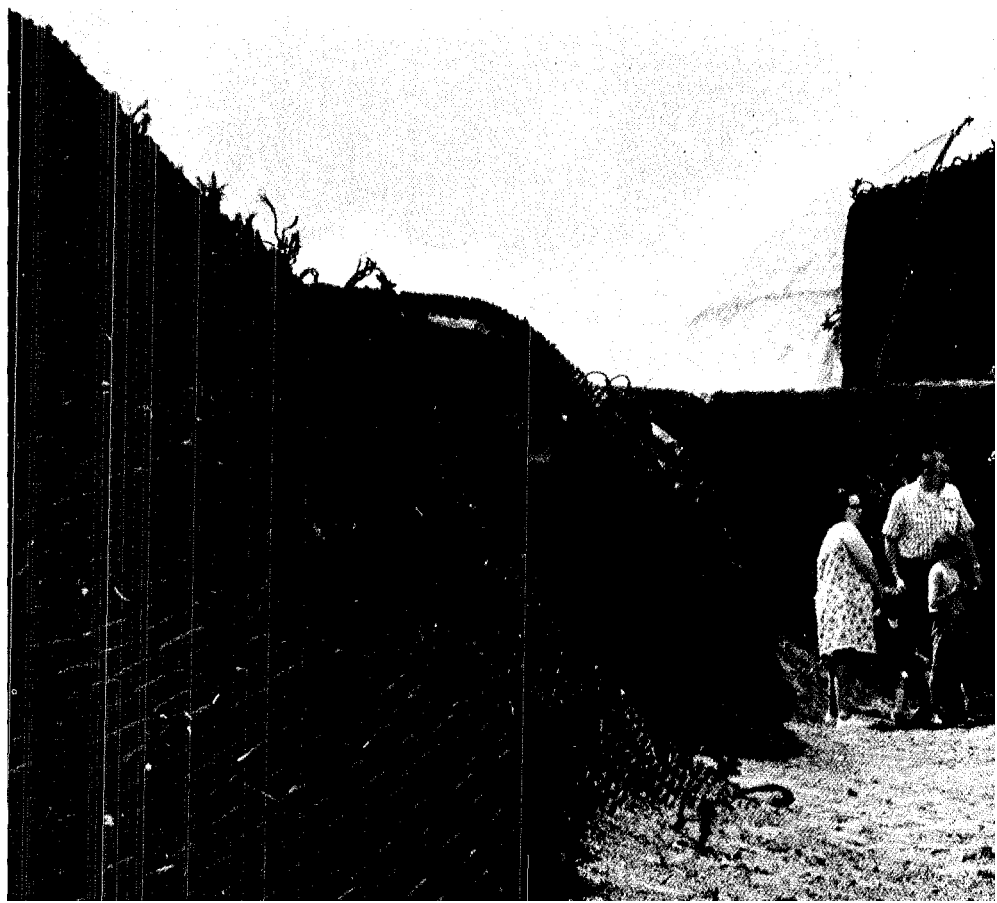


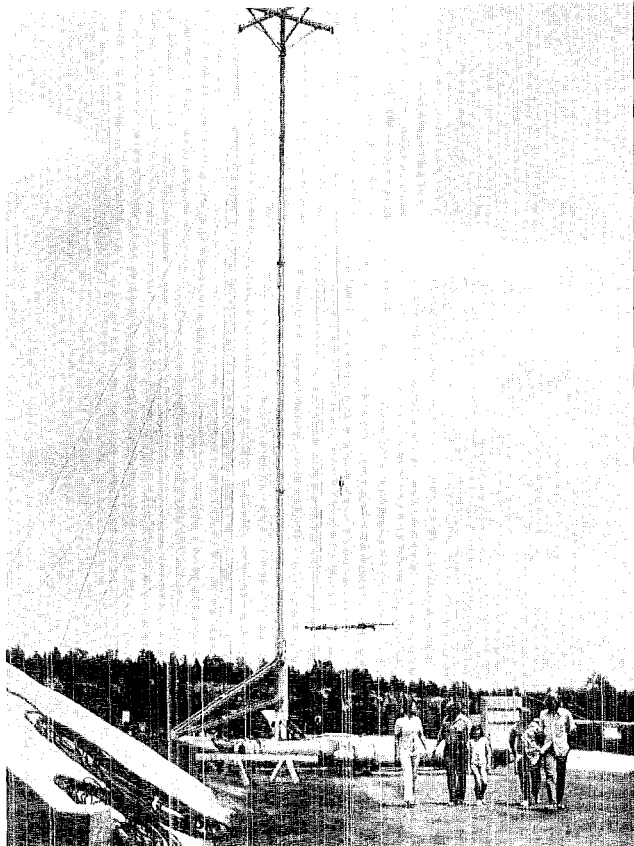


Left, Rosemary Griffith, ADSL, and her husband, Reed, are checked through the Administration Building security gate by Pablo Martinez and Jeremias Archuleta, both of the AEC Protective Force. Right, Leo Cowder, demonstrates Group A-1 high-resolution, gamma-ray detector. Members of his family are his wife, Alice, and children, front to back, Dale, Mike, Shelley and Gary.

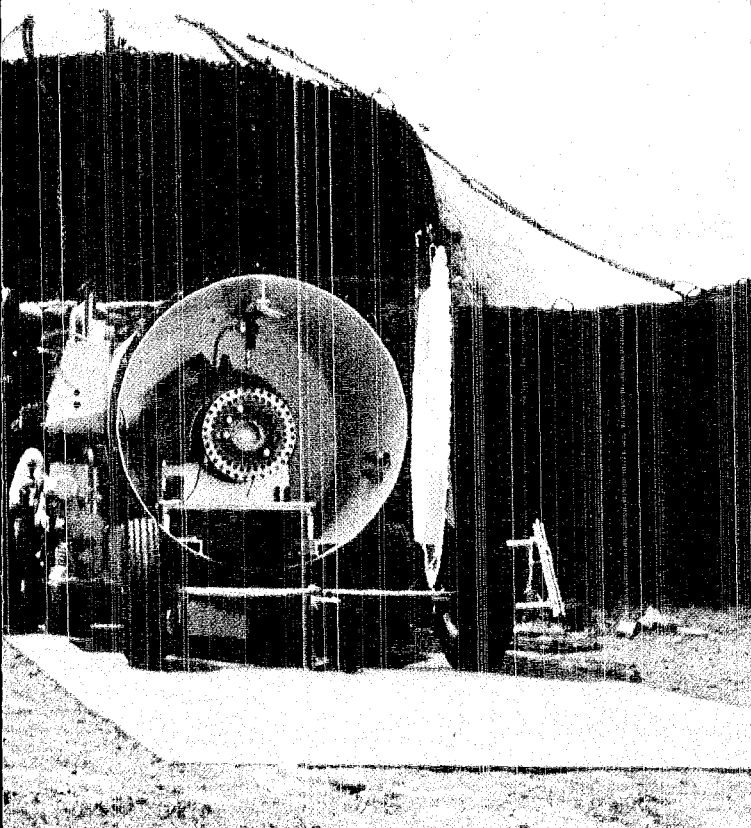


Above, many Family Days visitors stopped at the Q-23 laboratory where a rock-melting subterranean experiment was under way. Below, Art Williams explains operation of P-7 dense-plasma focus machine to his sons, Chriss, Forrest and Dean, and his wife, Barbara.

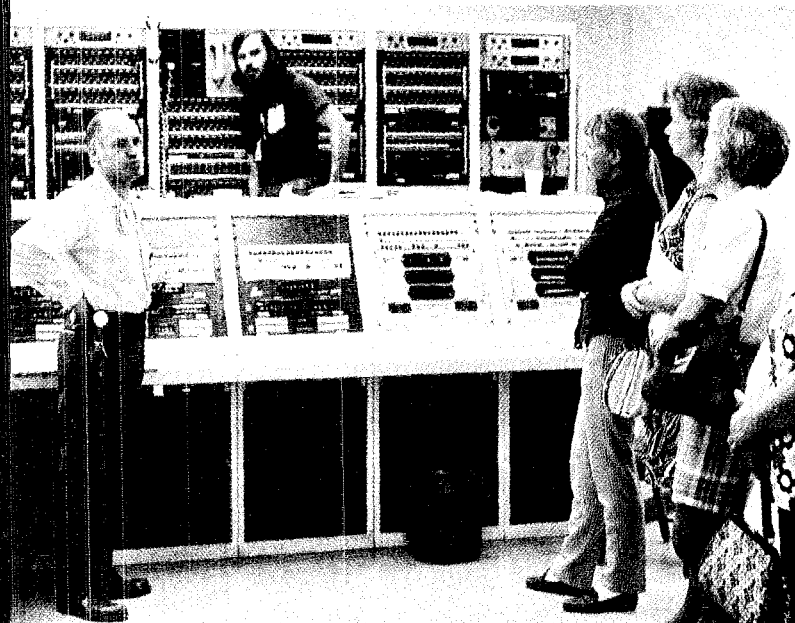




Above, leaving drop tower, used by Group WX-3 to determine sensitivity of high explosives, are Bill Spencer, WX-3, his wife, Jan, and children, Sandra, Kevin and Bill. Below, viewing a steel vessel used by Group M-2 in studies of high explosives at PHERMEX, are Lara Baker, TD-7, his wife, Judy, and daughters, Susan, Deanna and Ranae.



The week before Family Days at the Los Alamos Scientific Laboratory, a tour for dependents of LASL employees was held at the Nevada Test Site. Here, Lester Hackenberry, J-8, and Steve Davis, EG&G, explain command post operations for a weapons test.



One stop on the day-long tour of the Nevada Test Site was the Project Sedan crater, which was excavated by a nuclear device.



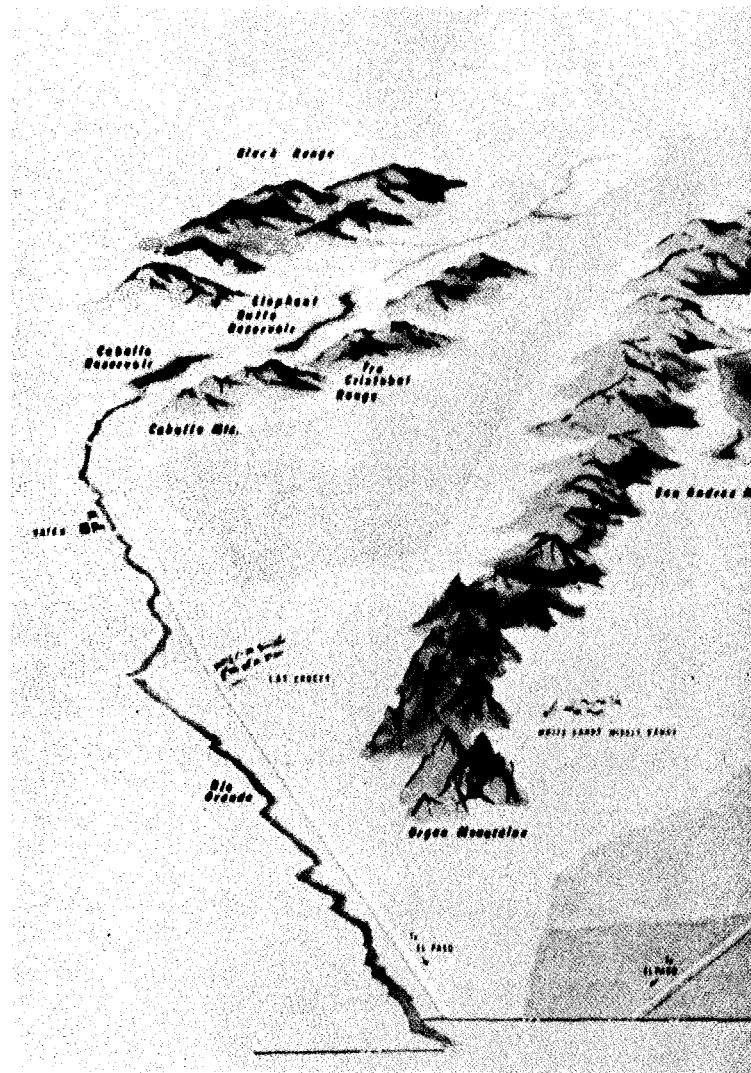
"Another Rio Grande for New Mexico?" is a report whose contents are as eye-catching as its title. It was prepared by members of the Los Alamos Scientific Laboratory's Engineering Department "... to suggest a way in which New Mexico's need for water and power might be satisfied, at least in large part, through imaginative use of resources already located within the state."

The idea is that it may be possible to desalt large amounts of underground brackish water in the Tularosa Valley in southern New Mexico—a million acre feet a year or the amount carried past Otowi Bridge, near Los Alamos, by the Rio Grande River annually. In addition, the operation would produce 2,000 megawatts of electric power each year, several millions of tons of valuable minerals, which would be separated out during the desalting process, and many associated recreational and social benefits for New Mexicans.

A proposal to conduct a feasibility study, to determine the potential of such a project, is now being prepared jointly by the Los Alamos Scientific Laboratory and the Water Resources Research Institute at New Mexico State University. It is based on a preliminary conceptual study reported in "Another Rio Grande for New Mexico?" by Philip Reinig, head of LASL's Engineering Department, Bob Brasier, assistant department head for program support, Bob Donham, ENG-7 group leader, and William Gregory, ENG-7. Hydrology data was provided by the U.S. Geological Survey.

"We started accumulating data and developing the concept in about 1968," said Reinig. "Then we wrote a few papers and talked with people in the Department of Interior and other federal agencies. We were encouraged by the Department of Interior to work with other qualified people within the state. This brings us to where we are today, in company with the Water Resources Research Institute, putting together a proposal for a feasibility study. We should have the proposal done this fall."

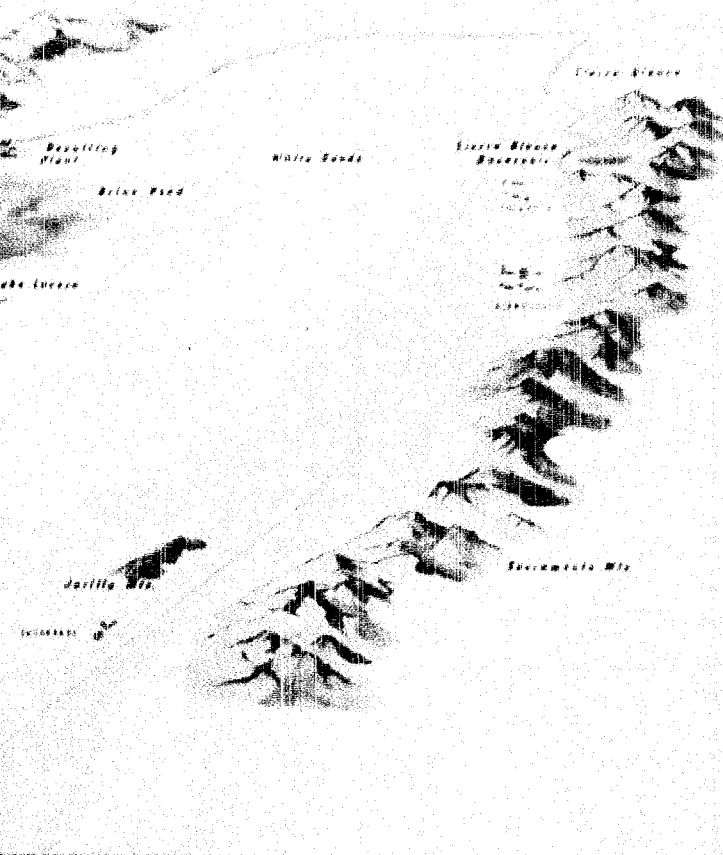
"The part that is unique about the concept," Reinig said, "is that the presence of water and power would produce a new economy for the area, including agriculture, industry and recreation, all without any net cost to the taxpayer. It envisions partly government, but mainly private, investments which would receive a return on all aspects—including land sales perhaps—of the business. This is what is different about the Tularosa-



The Tularosa-Rio

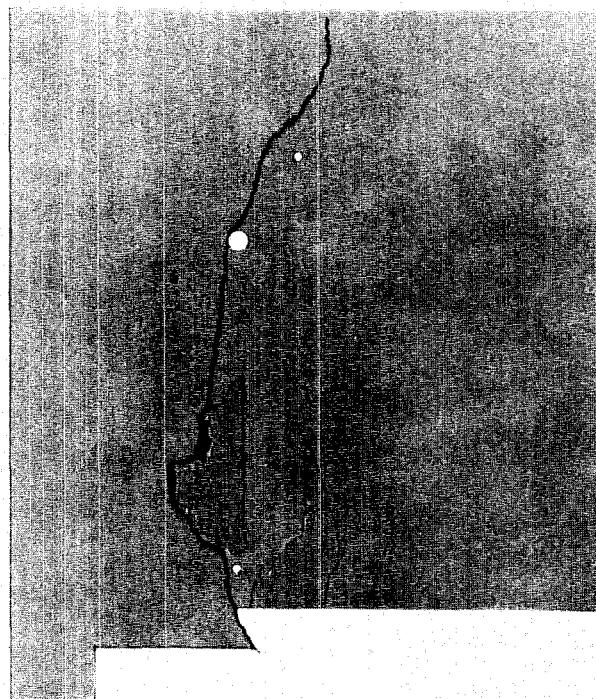
Grande Project, as we call it. The cost-benefit ratio for most other major resource development plans is predicted on the sale of just power and water. They don't take into account other benefits that can pay back the cost of the project and provide a return for investors. This difference is what ought to make this concept feasible in the Tularosa Valley and in other areas in the southwest where brackish water exists.

"The concept recognizes not only technical and economical aspects but political and legal sociological and environmental areas as well. There are some problems that would have to be overcome with new legislation, including defining



Drawing shows how the Tularosa-Rio Grande Project might look after step-by-step construction of desalting operations over a 15-year period.

With relation to the state of New Mexico, the Tularosa Valley is represented by the lower of the two irregular, seemingly raised areas. The other area represents a portion of the Rio Grande Valley that could be irrigated if desalted water were piped over the San Andres Mountains from the Tularosa Valley.



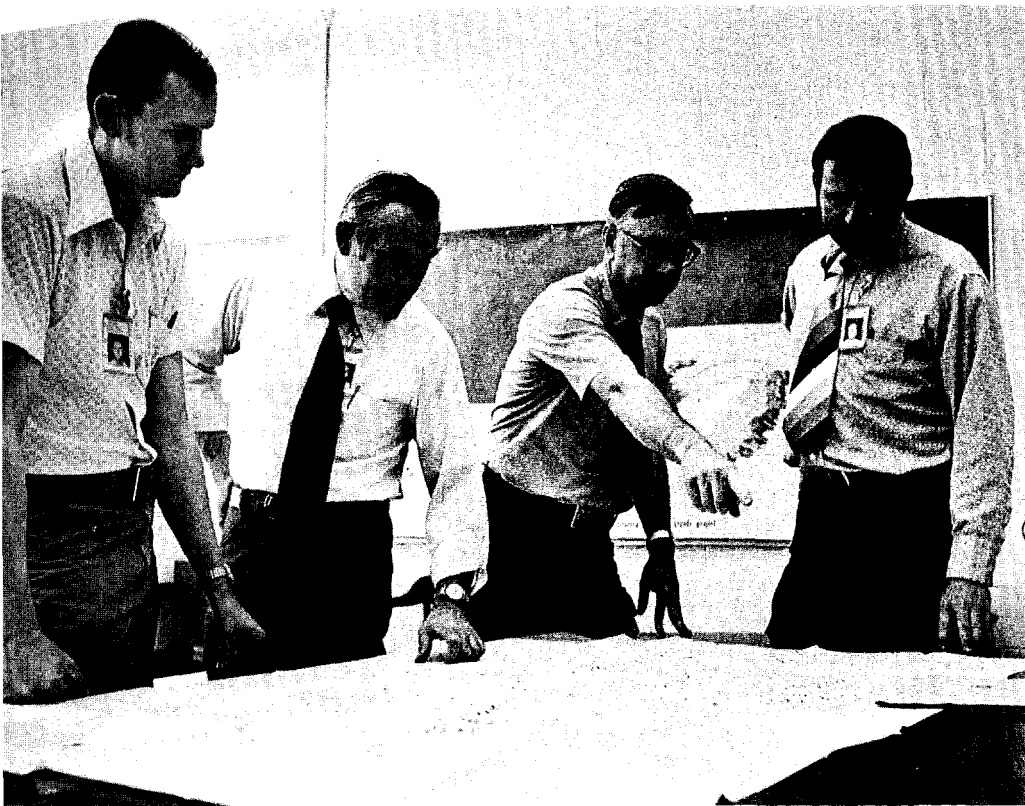
Grande Project

water rights and mineral rights, and there would also be the problem of securing the land from the different agencies that control it."

By current estimates the project would cost about \$2 billion over a time-span of 15 years. The feasibility study, which would include the investigation of financial and organizational arrangements, would take two to three years. Assuming that the project's feasibility would be confirmed, an overlapping four-step construction plan would follow.

First, a natural-gas-powered pilot plant would be built to produce about a million gallons of

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Inspecting a map which shows mineral concentrations in the state are authors of "Another Rio Grande for New Mexico?" They are Bob Donham, ENG-7 group leader, Philip Reinig, Engineering Department head, Bob Brasier, assistant department head for program support, and Bill Gregory, ENG-7.

fresh water a day. Construction would take about three years. While the plant's main purpose would be to define the desalting process best suited for the minerals and their concentrations in the Tularosa Valley water, it would also serve as a laboratory for materials development and mineral extraction studies, and for solving problems of scale formation and corrosion.

A year after beginning step one, the second step would begin. This would consist of building and operating a plant that would produce 10 million gallons of water each day or about twice the water requirements for a city the size of Los Alamos. This plant would operate for about four years. Like the pilot plant, its source of energy for pumping would probably be natural gas, although an important part of this step would be to investigate the possibility of using geothermal energy, produced by a technique under development at LASL. There would also be further exploration of the mineral by-product potential, experimental research on use of water for large-scale advanced agricultural methods, and planning for larger plants.

Construction and operation of this plant would be at least a four-year project. A year after its beginning, step three would be started. This would consist of the planning, design, construction and operation of a 100-million-gallon-a-day desalting plant. It would produce marketable electric power and minerals, and it would be used to define desalting systems for a plant about 10 times as large. Its energy source might be fossil fuel, or nuclear or geothermal.

This plant would be completed eight years after beginning step one. By this time the final step would have been under way for three years and would take about seven more years to complete. This would be the construction and operation of a plant using nuclear or geothermal energy to pump and desalt one billion gallons of fresh water per day and to generate 2,000 megawatts of electric power.

The water produced from the Tularosa Valley, which includes the White Sands Missile Range and the Trinity Site, "could provide the equivalent of another Rio Grande for hundreds of years," said Reinig.

short subjects

Larned Asprey, Group CNG-4, is the recipient of the New Mexico Institute of Chemist's 1973 Honor Scroll Award. It was presented at the organization's spring dinner meeting at Los Alamos.

The Honor Scroll Award is presented annually to an outstanding chemist or chemical engineer residing in New Mexico. Asprey was honored for achievements in the field of synthetic inorganic chemistry, including numerous papers on actinide, lanthanide and fluorine chemistry.



Arthur Cox, J-15 group leader, is one of six persons to receive an honorary degree from Indiana University during recent commencement exercises at Bloomington. Cox received the Ph.D. degree in astronomy from Indiana University in 1953.

John Hopkins, assistant J-Division leader for NTS testing, is one of about 20 scientists from about 13 countries invited to participate in the Review of Nuclear Proliferation Problems Symposium at Tallberg, Sweden, June 15-18.

The symposium is sponsored by the Stockholm International Peace Research Institute, an independent, international research organization established as a foundation in 1966 by the Swedish Parliament. Hopkins will present a paper entitled "Nuclear Weapons Technology."

Following the event Hopkins will take part in airborne scientific studies of the June 30 solar eclipse over Africa. Missions will be flown out of Madrid, Spain, aboard one of the Atomic Energy Commission's NC-135 "flying laboratories."



Isaac Valdez, Jr., Q-26, died in Santa Fe. He is survived by his wife, Lupe, and two children, Isaac and Cecilia Sullivan.

Frank Dunn, W-1, died recently. He is survived by his wife, Mizell, a son, Peter, and a daughter, Carol.

the technical side

Taken from Technical Information Release Forms submitted to ISD-6

German Physical Society Meeting, Göttingen, Germany, March 5-10:

"Double Ion Streams in the Solar Wind" by M. D. Montgomery, W. C. Feldman, J. R. Asbridge and S. J. Bame, all P-4

International Atomic Energy Agency Symposium on New Developments in Radiopharmaceuticals and Labeled Compounds, Copenhagen, Denmark, March 26-30:

"Medical and Biological Applications of Stable Carbon, Nitrogen and Oxygen Isotopes" by B. M. Tolbert, University of Colorado, Boulder, and N. A. Matwiyoff, CNC-4

Thirty-Third Annual Conference on Physical Electronics, University of California, Berkeley, March 28:

"Kikuchi Correlations in Low-Energy Electron Spectroscopy" by W. P. Ellis, T. W. Rusch and J. P. Bertino, all CMB-8

Conference on Explosive Nucleosynthesis, University of Texas, Austin, April 2-3:

"Explosive Carbon Burning" by W. M. Howard, P-11

Seminar, University of Wisconsin, Madison, April 3:

"The Status and Future of Geothermal Energy" by M. C. Smith, Q-22

Los Alamos-Santa Fe Subsection, Institute of Electrical and Electronics Engineers Meeting, Los Alamos, April 3:

"Some Instruments and Devices

for Laser Research and Development" by H. D. Sutphin, E-4

Physics Department Colloquium, University of Minnesota, Minneapolis, April 4; Joint Solid State-Nuclear Physics Seminar, Iowa State University, Ames, April 19; and Joint Electrical Engineering-Physics Department Colloquium, Utah State University, Logan, April 30:

"Fundamental Symmetries in Nuclear Physics" by W. A. Steyert, Q-26

Materials Science Seminar, University of New Mexico, Albuquerque, April 4:

"Pseudopotential Calculations of Thermodynamic Properties" by G. K. Straub, TD-4

continued on next page

1973 Southwestern Institute of Electrical and Electronics Engineers Conference and Exhibition, Houston, Texas, April 4-6:

"0.9 GW System for Feedback Control of the Scyllac MHD Instability" by R. F. Gribble, Q-3

"A Review of the Major Confinement Systems in the U.S. Controlled Thermonuclear Research Program" by E. L. Kemp, Q-4

"Lasers for Fusion" by D. H. Gill, L-2 (invited)

Eighteenth Annual New Mexico Water Conference, New Mexico State University, Las Cruces, April 5-6:

"Another Rio Grande for New Mexico?" by L. P. Reinig, and R. I. Brasier, both ENG-DO, B. J. Donham and W. S. Gregory, both ENG-7

Controlled Thermonuclear Research Electrical Insulator Research and Development Meeting, Brookhaven National Laboratory, Upton, N.Y., April 5-6:

"The Status of the RTPR Engineering Design: An Update" by W. Ellis, Q-3, R. A. Krakowski, Q-DO, T. A. Oliphant, Jr., Q-6, and F. L. Ribe, Q-DO

Colloquium, Oral Roberts University, Tulsa, Okla., April 6:

"Cosmic Rays from the Sun" by I. D. Palmer, P-4

American Nuclear Society Topical Meeting on Mathematical Models and Computational Techniques for Analysis of Nuclear Systems, Ann Arbor, Mich., April 8-11:

"A Linked System of Reactor Physics Codes" by J. C. Vigil and B. M. Carmichael, both T-1

"Triangular Mesh Methods for the Neutron Transport Equation" by W. H. Reed and T. R. Hill, both T-1

"Transport Theory Numerical Methods" by K. D. Lathrop, T-1

Spring Meeting, American Chemical Society, Dallas, Texas, April 8-13:

"Synthesis, Structure and Properties of a New Iron-Sulfur Cluster

Compound $[(C_5H_5)Fe(NCCH_3)(SC_2H_5)]_2^{+2}$ " by P. J. Vergamini, G. J. Kubas and R. R. Ryan, all CNC-4

"A General Synthetic Pathway for the Preparation of Transition Metal Fluorides" by R. T. Paine and L. B. Asprey, both CNC-4

"New Iron-Sulfur Cluster Compounds Containing Two, Three and Four Iron Atoms" by G. J. Kubas and P. J. Vergamini, both CNC-4, T. G. Spiro, Princeton University, N. J., and A. Terzis, University of Montreal, Quebec, Canada

"Carbon-13 Nuclear Magnetic Resonance Spectroscopy of Cobalamins and Cobinamides Selectively Enriched with Carbon-13" by T. E. Needham, N. A. Matwiyoff, both CNC-4, T. E. Walker and H. P. C. Hogenkamp, both College of Medicine, University of Iowa, Iowa City

"Kinetics of the Nitrogen Trifluoride-Hydrogen Atom Reaction" by S. W. Rabideau, CNC-2

Data Security Symposium, Massachusetts Institute of Technology, Cambridge, April 9-11:

"Hydra" by R. B. Lazarus, C-DO (invited)

Association for Computing Machinery's Workshop on Programming Languages and Operating Systems, Savannah, Ga., April 9-12:

"Programming by Semantic Refinement" by J. B. Morris, C-7

Second International Symposium on Cancer Detection, Bologna, Italy, April 9-13:

"Tumor Cell Identification and Separation Using High-Speed Multiparameter Cell-Sensing Techniques" by P. F. Mullaney, J. A. Steinkamp, M. R. Raju and P. K. Horan, all H-10

Defense Nuclear Agency Atmospheric Effects Symposium, San Diego, Calif., April 9-13:

"Debris-Air Interactions and their Effects on Radar Clutter" by E. W. Salmi, ADWP-2

"Summary of the LASL Fireball Turbulence Workshop" by R. A. Gentry and H. M. Ruppel, both T-3

"Two-Dimensional Fireball Cal-

culations" by M. T. Sandford, II, and R. C. Anderson, both J-10

"LASL Calculations of Low-Altitude Fireballs using the Iced-Ale Method" by H. M. Ruppel, and R. A. Gentry, both T-3, and E. M. Jones, J-10

"Effects of Turbulence on Low-Altitude Fireballs at Medium and Late Times" by H. M. Ruppel and R. A. Gentry, both T-3

"Three-Dimensional Multiburst Simulation using the Iced-Ale Method" by W. E. Pracht, T-3

"Two-Dimensional Effects on Thermal Output" by E. M. Jones, J-10

"Atmospheric Ionization Produced by Sprint Bursts" by W. B. Maier, II, and C. D. Sutherland, both J-10

"Ion Coupling, Electron Heating and Magnetic Turbulence from Plasma Instabilities" by D. W. Forslund and J. M. Kindel, both T-6, and E. L. Lindman, Jr., J-10

"Oblique Shocks in a Magnetized Plasma" by D. W. Forslund and J. M. Kindel, both T-6, and E. L. Lindman, Jr., J-10

"Neutron and Gamma Transport Calculations for Sprint" by W. T. Brown and W. H. Roach, both J-10

"Theoretical and Experimental Studies of Strong Shock Waves in Air" by J. Zinn and R. C. Anderson, both J-10, and W. C. Davis and T. R. Schwartz, both M-3

"Striation of the Ion Cloud Produced in the Oosik Experiment" by P. J. Bottoms and M. S. Tierney, both J-10

"Late-Time Phenomenology Predictions with an Almost-Lagrangian Code" by J. U. Brackbill, T-3, C. D. Sutherland and M. S. Tierney, both J-10

"High-Altitude Loss Cone and Charge Exchange Calculations, and Comparison with Starfish Data" by J. Zinn and M. S. Tierney, both J-10

"The UV-Charge Exchange Energy Loss Partition as a Function of Burst Altitude and Yield-to-Mass Ratio" by M. S. Tierney and J. Zinn, both J-10

"A Debris Energy Patch Calcula-

tion" by J. U. Brackbill, T-3, C. D. Sutherland, M. S. Tierney and J. Zinn, all J-10

"Low-Altitude Fireball Calculations" by J. W. Kodis and J. Zinn, both J-10

"Extension of the MRC Multi-burst" by E. M. Jones and R. C. Anderson, both J-10

"Single Burst Calculations with Yaqui" by E. M. Jones, J-10, and R. A. Gentry and H. M. Ruppel, both T-3

"Comparison of Lockheed and AFWL Based Absorption Coefficients for Air" by A. N. Cox and J. E. Tabor, both J-15

"Relevance of Atmospheric Effects Studies to the Weapons Development Program" by D. M. Kerr, J-DO (invited)

"Fireball Calculations with the S_n -Method" by H. G. Horak, J-10

"Radiative Transfer Approximations in Fireball Modeling" by C. G. Davis and S. S. Bunker, both J-15

Seminars, Nuclear Engineering Department and Physics Department, Texas A&M University, College Station, April 10:

"Neutron Spectrum of the Fast Critical Assembly, BIG-10" by E. J. Dowdy, A-2

"Prompt and Delayed Neutron Yields from Photofission of ^{232}Th , ^{235}U , ^{238}U , and ^{239}Pu Near the Threshold" by E. J. Dowdy and J. T. Caldwell, both A-2

Biochemistry Department, University of California, Riverside, April 10:

"Studies with Biosynthetic Polynucleotides" by R. L. Ratliff, H-9 (invited)

Department of Police Science, New Mexico State University, Las Cruces, April 11:

"Explosives, Some of their Characteristics and Possible Illegal Uses" by T. E. Larson, WX-2

Seminar, Department of Chemistry, Colorado State University, Fort Collins, April 11:

"Synthesis of Compounds Label-

ed with Stable Isotopes" by D. G. Ott, H-11 (invited)

Colloquium, Physics Department, Purdue University, Lafayette, Ind., April 12:

"Los Alamos Meson Physics Facility—Present Status and Future Program" by D. A. Swenson, MP-9

Respirator Training Course, Northern California Section, American Industrial Hygiene Association, San Francisco, April 12:

"Training, Fitting, Maintenance, and Care of Respirators" by B. J. Held, H-5

Seminar, Electrical Engineering Department, University of New Mexico, Albuquerque, April 12:

"The Los Alamos Cell Analysis and Sorting Program" by J. A. Steinkamp, H-10 (invited)

New Mexico Institute of Mining and Technology, Socorro, April 12:

"The Subterranean Concept and Its Related Applications" by R. J. Hanold, Q-23 (invited)

Industrial Hygiene Roundtable, Santa Fe, N. M., April 13:

"Energy Today" by G. A. Graves, ADRG

Symposium on The Physics of Fusion Power, Spring Meeting, New England Section, American Physical Society, Hartford, Conn., April 13-14:

"Pulsed High-Beta Fusion Approaches" by J. L. Tuck, P-DO (invited)

Fifty-Seventh Annual Meeting, Federation of American Societies for Experimental Biology, Atlantic City, N.J., April 15-20:

"Histone Phosphorylation in G_2 and Mitosis" by L. R. Gurley, R. A. Walters and R. A. Tobey, all H-9

"DNA-Membrane Complexes in Chinese Hamster Cells: Cell-Cycle Studies" by C. E. Hildebrand, R. L. Ratliff and R. A. Tobey, all H-9

"Lasers in Medicine and Biology" by F. Young, L-4

Technical Staff, Glass and Ceramics Research, Corning Glass Works, Corning, N.Y., April 16:

"The LASL Rock-Melting Subter-

rene" by J. C. Rowley, Q-23 (invited)

Physics Colloquium, Rice University, Houston, Texas, April 16:

"Status of LAMPF Experimental Areas and Early Experimental Program" by R. J. Macek, MP-6

American Institute of Chemical Engineers and Materials Science Society Meeting, Mississippi State University, Starkville, April 16:

"The Use of the CO_2 Laser in the Study of High-Temperature Phase Relations" by S. R. Skaggs, WX-6

Physics Department Seminar, University of Pittsburgh, Pa., April 16:

"Nuclear and Particle Physics at LAMPF" by R. E. Mischke, MP-4

American Geophysical Union's 54th Annual Meeting, Washington, D.C., April 16-20:

"Temperature and Temperature Gradient in the Corona from Solar Wind Heavy Ion Data" by P. D. Kearney, Colorado State University, Fort Collins, J. R. Asbridge, S. J. Bame and W. C. Feldman, all P-4

"The Plasma Sheet at a Geocentric Distance of $17\frac{1}{2}R_E$ " by E. W. Hones, Jr., and J. R. Asbridge, both P-4, and S. I. Akasofu, University of Alaska, Fairbanks

"Plasma Sheet Recovery: A Slow Shock?" by V. M. Vasyliunas, Massachusetts Institute of Technology, Cambridge, E. W. Hones, Jr., and S. J. Bame, both P-4, and S. Singer, L-1

"Solar Wind Heavy Ions in Flare Piston Gas" by S. J. Bame, J. R. Asbridge and W. C. Feldman, all P-4, and P. D. Kearney, Colorado State University, Fort Collins

"Perpendicular Shocks in the Solar Wind" by J. K. Chao, and N. F. Ness, both Laboratory for Extraterrestrial Physics, NASA-GSFC, Greenbelt, Md., W. C. Feldman and S. J. Bame, both P-4

"Bow Shock Perturbation of the Upstream Solar Wind Proton Component" by W. C. Feldman, J. R. Asbridge and S. J. Bame, all P-4

"Variations in the Helium Com-

continued on next page

ponent of the Solar Wind" by J. R. Asbridge, S. J. Bame and W. C. Feldman, all P-4

"The Anisotropy Variation with Time Observed in Low-Energy Solar Cosmic Ray Events" by I. D. Palmer, P-4, and S. Singer, L-1

"Modulation in Solar Cosmic-Ray Flux at 1 AU Associated with Interplanetary Shock Waves" by S. Singer, L-1, and I. D. Palmer, P-4

"The Opacities of Transparent Materials as a Function of Temperature and Wave Length, and their Geophysical Implications" by T. A. Weaver, J-9

"Shock Compression of the Webster Dunite" by R. D. Dick, M-4, T. A. Weaver, J-9, and B. Olinger, M-6

"On the Marginally Stable Saturation Spectrum of Unstable Type I Equatorial Electrojet Irregularities" by K. Lee, T-6, F. V. Coroniti and C. F. Kennel, both University of California, Los Angeles

"Payload Performance of the Shaped-Charge Barium Injection Experiment, Oosik" by J. H. M. Fu, EG&G, Inc., Los Alamos, H. M. Peek, J-10, and E. P. Marram, Geosearch, Inc., Boston, Mass.

"Results of Five Successful Magnetospheric Probing with Barium Shaped-Charge-Generated Plasma Jets" by E. M. Wescott, E. R. Rieger, H. C. Stenbaek-Nielsen, W. B. Murray and T. N. Davis, all University of Alaska Geophysical Institute, Fairbanks, H. M. Peek and P. J. Bottoms, both J-10

Nuclear Physics Seminar, Princeton University, N.J., April 17:

"Trends in the Study of the Parity-Violating Interaction between Hadrons" by R. E. Mischke, MP-4

Seminar, Physics Department, Rutgers University, New Brunswick, N.J., April 18:

"Selected Portions of the Physics Program for LAMPF" by R. E. Mischke, MP-4

League of Women Voters State Convention, Los Alamos, April 18:

"Progress and Promise of Geo-

thermal Energy" by M. C. Smith, Q-22

American Association for the Advancement of Science, Southwestern and Rocky Mountain Division's 49th Annual Meeting, Lubbock, Texas, April 18-21:

"Oxygen Bomb Combustion Calorimetry of Metallic Carbides" by C. E. Holley, Jr., and E. J. Huber, Jr., both CNC-2

"Half-Life of Plutonium-241" by R. K. Zeigler, C-5, and Y. M. Ferris, Dow Chemical, Rocky Flats Division, Golden, Colo.

American Nuclear Society Student Section, University of New Mexico, Albuquerque, April 19:

"The LASL Rock-Melting Nuclear Subterranean" by J. C. Rowley, Q-23 (invited)

Symposium on Economic Development vs. Environmental Quality in the Southwest, American Association for the Advancement of Science, Texas Technological University, Lubbock, April 19-20:

"Some Interfaces in Resource Utilization" by L. P. Reinig, ENG-DO

American Physical Society Meeting, Washington, D.C., April 23-26:

"Proton-Proton Elastic Scattering at 19.700 MeV" by N. Jarmie, P-DOR, and J. H. Jett, H-10

"Fission Neutron Spectra of ^{238}U and ^{235}U as a Function of Incident Neutron Energy" by G. F. Auchampaugh and C. E. Ragan, both P-3

"High-Energy, Short-Pulse, Gas Laser Systems" by C. A. Fenstermacher, L-1 (invited)

"Design for a Polarized Triton Source" by R. A. Hardekopf and J. L. McKibben, both P-9, and T. B. Clegg, University of North Carolina, Chapel Hill

"Fast Reversal of Sign of Polarization in a Lamb-Shift H^- Source" by J. L. McKibben and R. A. Hardekopf, both P-9, and R. R. Lewis, University of Michigan, Ann Arbor

"The Decay of ^{126}Sb (12.4-d) to ^{126}Te " by M. E. Bunker and J. W.

Starnier, both P-2, and C. J. Orth, CNC-11

"Longitudinal Polarization Transfer in the $\text{T}(p,n)^3\text{He}$ Reaction from 4 to 15 MeV" by J. J. Jarmer, G. G. Ohlsen, J. E. Simmons and G. C. Salzman, all P-DOR

"Helium-3 (Deuteron, Deuteron) Helium-3 Polarization Transfer" by P. A. Lovoi, G. G. Ohlsen and G. C. Salzman, all P-DOR, and W. E. Gruebler, Federal Technical Institute, Zurich, Switzerland

"Polarization Transfer in the Deuteron (Deuteron, Neutron) Helium-3 Reaction" by G. C. Salzman, J. J. Jarmer, J. E. Simmons and G. G. Ohlsen, all P-DOR, J. C. Martin, H-10, and T. R. Donoghue, Ohio State University, Columbus

"Spin-1 Analyzing Power Measurement Techniques" by G. G. Ohlsen and P. W. Keaton, Jr., both P-DOR

"X-Ray Intensity Ratios, $\text{L}\alpha/\text{L}\beta$ and $\text{L}\alpha/\text{L}\gamma$, Produced by 1.0 to 3.7 MeV Proton Bombardment" by D. A. Close, J. J. Malanify and C. J. Umbarger, all A-1, and R. C. Bearse, visiting staff member in A-1

"High-Resolution Multiwire Proportional Counters Using Helically Wound Cathodes" by D. M. Lee and S. E. Sobottka, both University of Virginia, Charlottesville, and H. A. Thiessen, MP-7

"The Clinton P. Anderson Meson Physics Facility (LAMPF)" by L. Rosen, MP-DO (invited)

"Collisional Transport of Energetic Electrons in a Radiantly Heated Medium" by W. P. Gula, K. Lee, and R. L. Morse, all T-6, and D. B. Henderson, TD-8

"Low-Energy Photodisintegration of Helium-3" by B. F. Gibson, T-5, and D. R. Lehman, George Washington University, Washington, D.C.

"Theoretical Uncertainties in the Extraction of the Singlet Neutron-Neutron Scattering Length from the Reaction: Negative Pion Plus Deuteron Goes to Gamma Ray Plus Two Neutrons" by W. R. Gibbs and B. F. Gibson, V, both T-5, and G. J. Stephenson, Jr., visiting staff member in T-5

"Application of the Single-Wire Helix Proportional Chamber to Magnetic Spectrographs for Nuclear Reaction Studies" by E. R. Flynn, P-12, S. Orbesen and N. Stein, both P-DOR, H. A. Thiessen, MP-7, D. M. Lee and S. E. Sobottka, both University of Virginia, Charlottesville

"The $^{59}\text{Co}(t, d)^{60}\text{Co}$ and $^{60}\text{Ni}(t, d)^{61}\text{Ni}$ Reactions at 15 MeV" by N. Stein and S. D. Orbesen, both P-DOR, E. R. Flynn, P-12, and D. M. Lee, MP-7

"Simultaneous Analysis of p- ^4He and n- ^4He Elastic Scattering" by R. A. Nisley, G. M. Hale and P. G. Young, all T-2, D. C. Dodder, T-9, and N. J. Jarmie, P-DOR

"Negative-Energy T-Matrix Elements in a Wave Function Model" by H. S. Picker, Trinity College, Hartford, Conn., E. F. Redish, University of Maryland, College Park, and G. J. Stephenson, Jr., T-5

"Half-Shell Expansion Coefficients for Higher Two-Nucleon Partial Waves" by E. F. Redish, University of Maryland, College Park, and G. J. Stephenson, Jr., T-5

"A Wave Function Model for the Half-Shell Two-Nucleon T-Matrix Applied to Uncoupled Partial Waves with $\epsilon > 0$ " by G. J. Stephenson, Jr., T-5, H. S. Picker, Trinity College, Hartford, Conn., and E. F. Redish, University of Maryland, College Park

"Neutron-Induced Gamma-Ray Production Cross Sections for ^{235}U from $E_n = 5$ to 8 MeV" by D. M. Drake, P-3

"Expansion and Thermonuclear Burn Characteristics of Uniform DT Spheres" by H. N. Fisher, E. J. Linnebur, R. J. Mason and R. L. Morse, all TD-8

"Performance of DT Targets Exposed to Non-Optimized Laser Pulses" by E. J. Linnebur, H. N. Fisher, R. J. Mason and R. L. Morse, all TD-8

"Laser-Driven Implosion and Thermonuclear Burn of DT Spheres and Shells" by R. J. Mason, H. N. Fisher, E. J. Linnebur and R. L. Morse, all TD-8

"Stability of Laser Fusion Tar-

gets" by D. B. Henderson and R. L. Morse, both TD-8

"Thermonuclear Burn Characteristics of Compressed DT Microspheres" by G. S. Frayley, E. J. Linnebur, R. J. Mason and R. L. Morse, all TD-8

"Parametric Instability of Whistler Solitary Waves" by S. J. Gitomer, University of Pennsylvania, Philadelphia, and D. W. Forslund, T-6

"The Velocity of Interface Propagation during Destruction of Superconductivity by a Current" by W. C. Overton, Jr., Q-26

"Three-Dimensional Numerical Solution of the Parametric Decay Instability Kinetic Equation" by J. D. Letterio, Air Force Weapons Laboratory, Albuquerque, and B. B. Godfrey, T-6

"Atomic Capture of Negative Mesons I" by M. Leon, MP-3, and R. Seki, California State University, Northridge

Ruder Boskovic Institute, Zagreb, Yugoslavia, April 24:

"Polarization Work in Nuclear Physics at Los Alamos" by P. W. Keaton, Jr., P-DOR

American Nuclear Society's National Topical Meeting on "The Oceans, Nuclear Energy and Man," Singer Island, Fla., April 25-27:

"Reactor Power Plant for Undersea Applications" by R. I. Brasier, ENG-DO, and C. B. Mills, T-6

University of Massachusetts, Amherst, April 25, and University of Virginia, Charlottesville, May 1:

"Nuclear Effects in the Production of Pi-Plus and Pi-Minus by Protons on Nuclei" by R. R. Silbar, T-5, and M. M. Sternheim, University of Massachusetts, Amherst

Seminar, Ohio State University, Columbus, April 27:

"Polarization Program at the LASL Tandem Van de Graaff" by G. G. Ohlsen, P-DOR (invited)

Regional Workshop on Translations Services in Libraries, Albuquerque, April 27:

"An Approach to Translation Searching" by Carol Malmberg, ISD-4

American Ceramic Society's 75th Annual Meeting, Cincinnati, Ohio, April 29-May 3:

"Effect of Fast Neutron Irradiation on Bonded Ceramic-Metal Specimens" by W. A. Ranken, Q-25, and J. Chin, Gulf General Atomics, La Jolla, Calif.

"Fast Neutron Damage Effects on Oxide Ceramics" by W. A. Ranken, Q-25, and T. G. Frank, L-5

"Fabrication and Evaluation of Plutonia-Iridium Cermets" by M. Tokar, AEC Headquarters, Washington, D.C., T. K. Keenan, M. W. Shupe and R. W. Zocher, all CMB-11

"Electrical Insulation Problems in the Pulsed Fusion Reactor" by F. W. Clinard, Jr., CMB-5

Radiation Research Society's 21st Annual Meeting, St. Louis, Mo., April 29-May 3:

"Enhanced Removal of Radio-rubidium from Rodents and Beagles with Ferric Ferrocyanide" by C. R. Richmond, H-DO, G. A. Drake and Jerry E. London, both H-4

"DNA Distribution of Normal and Tumor Cells in Mice" by M. R. Raju, T. T. Trujillo, P. F. Mullaney and J. A. Steinkamp, all H-10, and R. A. Walters, H-9

"Effects of X-Irradiation on Deoxynucleoside Triphosphate Pools in Chinese Hamster Cells" by R. A. Walters and R. L. Ratliff, both H-9

"Effects of Repeated Acute Gamma-Ray Exposures on Injury and Recovery and on the Long-Term Radiation Lesion in the Monkey" by J. F. Spalding and L. M. Holland, both H-4

Physics Department, University of Kansas, Lawrence, April 30:

"Some Aspects of Numerical Simulation of Hot Dense Material" by J. Nachamkin, T-6 (invited)

Physics Seminar Program, University of Texas, El Paso, April 30:

"Physics of Laser Fusion Targets" by R. S. Cooper, L-DO

Colloquia, Bell Laboratories, Murray Hill, N.J., May 1:

"Hot Electron Production and Anomalous Microwave Absorption Near the Plasma Frequency" by H. Dreicer, Q-1

10



years ago in los alamos

Culled from the June, 1963, files of the LASL News and the Los Alamos Monitor
by Robert Porton

Lutherans Win Hospital Ballot

The Lutheran Hospital and Homes Society of America, Inc., was selected in a special referendum to operate the AEC-owned hospital facility at Los Alamos. The Lutheran group, of Fargo, N.D., which professionally operates 55 hospitals and homes, was selected by a narrow margin of 253 votes over Los Alamos Medical Center, Inc. The vote was 1,307 to 1,054.

"109" Closes

Closing of the Los Alamos Scientific Laboratory's wartime-established Santa Fe office at 109 E. Palace coincided with the retirement of Dorothy McKibben, manager of the office for all of its 20 years of existence. In the early days of the Manhattan Project, Mrs. McKibben was the first contact for scientists, technicians, soldiers, WACs and housewives with the "secret" community of Los Alamos. The closing was marked with a brief ceremony during which Laboratory Director Norris Bradbury unveiled a plaque commemorating the Santa Fe office's location. The plaque, lettered in bronze, states: "All the men and women who made the first atomic bomb passed through this portal to their secret mission at Los Alamos. Their creation in 27 months of the weapons that ended World War II was one of the greatest scientific achievements of all time."

New Bank to Open

The Los Alamos National Bank, the city's only locally based commercial bank, held its grand opening. Organizational meetings for the new institution began in early February. After approval by the Comptroller of the Currency, 17,500 shares of stock went almost immediately to 691 shareholders, nearly all of whom are local residents.

Diamond Drive Improvements

Diamond Drive is going to get a going over in a new effort to ease rush-hour traffic congestion. Work planned by the Zia Company includes widening of the street to six lanes between the bridge over Los Alamos Canyon and the High School, restriping of the bridge to provide four traffic lanes, widening of the roadway south of the bridge to Jemez Road, and installation of additional traffic signals, with all signals controlled and coordinated by a master timer.

what's doing

RIO GRANDE RIVER RUNNERS: Meetings scheduled for noon, second Friday of each month. For information call Dick Young, 983-9770.

SPORTS CAR CLUB DEL VALLE RIO GRANDE: Meetings, 7:30 p.m., Hospitality Room, Los Alamos National Bank, first Tuesday of each month. For information call Hunter Hill, 672-9550, or Wayne Fullerton, 662-4171.

LOS ALAMOS VOLLEYBALL CLUB: Each Monday, High School Girls' Gym, Men—6:30 p.m. Women—8:30 p.m. For information call Don Shepard, 662-7865.

PUBLIC SWIMMING: High School Pool—Monday through Friday, 2 to 6:30 p.m. and 7 to 10 p.m.; Saturday and Sunday, 1 to 6 p.m.; Adult swim club, Sunday 7 to 9 p.m. (Schedule, June through July).

MESA PUBLIC LIBRARY:

Until June 12—Jean and Don Sterner, watercolors and oils

June 5-July 5—Mabel Morrow, Indian doll collection

June 13-July 9—Marlee Meissner, crayons and charcoals

July 5-Aug. 14—Museum of New Mexico "Sculpture of the Southwest"

July 10-Aug. 7—Gretchen Noth Goldstine, pots, paintings and drawings

MOUNTAIN MIXERS SQUARE DANCING CLUB: Pinon Park, 8 p.m. For information call Barry Lenhart, 672-9798.

June 16—"Bones" Craig, former club caller

July 7—Warren Rowles, Grand Junction, Iowa

NEWCOMERS CLUB: June 27—Mothers and Children's Picnic, Horse Mesa Picnic area, 11:30 a.m. For information call Pat Astel, 662-4709.

OUTDOOR ASSOCIATION: No charge, open to the public. Contact leaders for information. River Trips*

*June 9-10—Upper San Juan River, Tom Springer, 662-7406

*June 14-24—American Canoe Association Summer Encampment, Arkansas River, Buena Vista, Colo., ACA, 4260 E. Evans Ave., Denver, Colo., 80222

*June 17—Conejos River, Dave Blevins, 662-7458

*June 17—Truth or Consequences Race, Mike Tooley, Box 752, Truth or Consequences, N.M. 87901

*June 23—Trampas Mountain, Reed Elliott, 662-4515

June 30-July 1—Ute Mountain, Ken Chellis, 662-3826

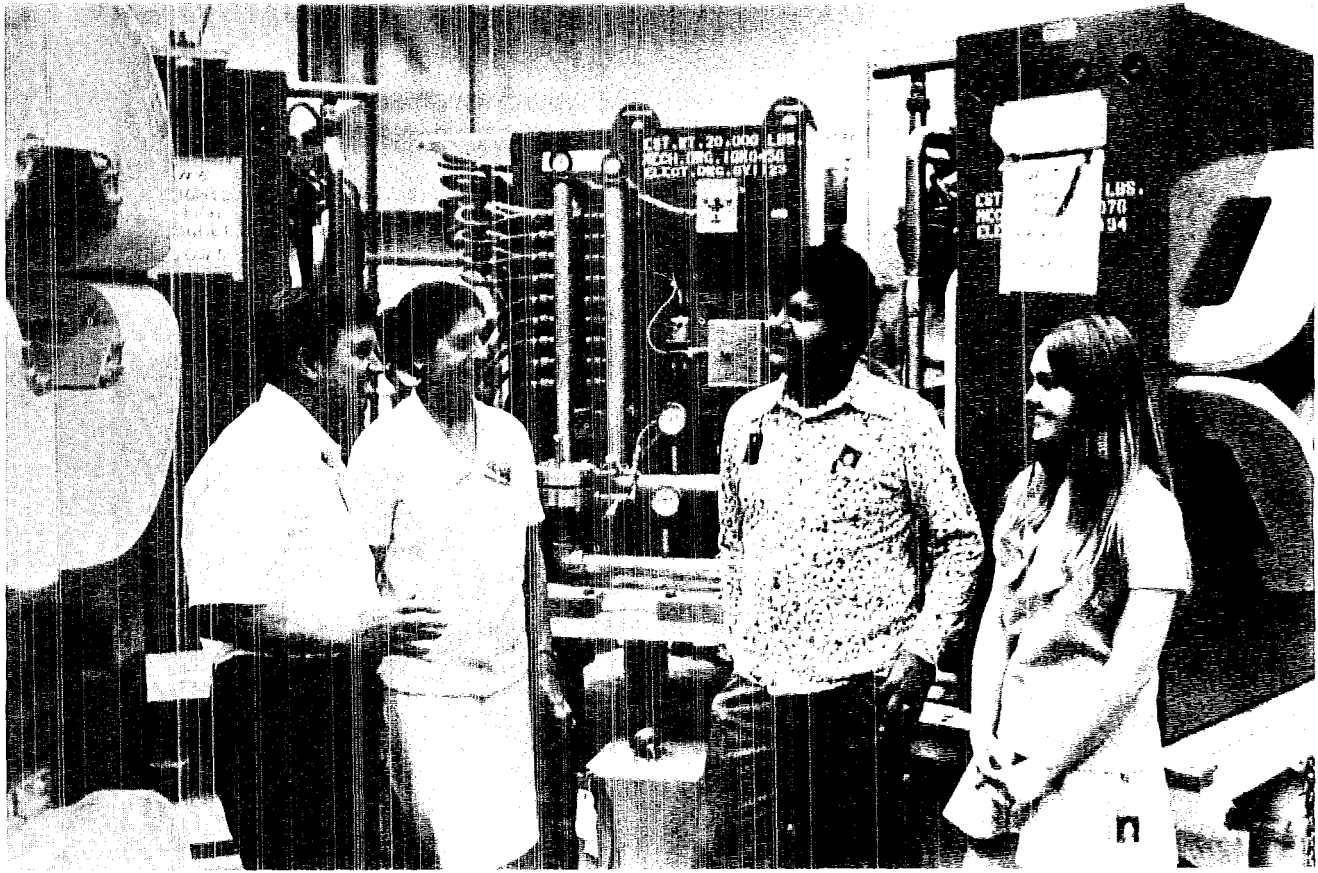
*June 30-July 4—Needle Mountains, Colo., Wally Green, 672-3203

*July 7—Red River to Dunn's Bridge, Wally Green, 672-3203

*July 8—County Line to Velarde, John Sullivan, 662-6785

*July 14-15—Heart and Latir Lakes, Reed Elliott, 662-4515

*July 14-15—Creede to South Fork, Colo., Tom Springer, 662-7406



Alex Harvey, MP-6, tours Experimental Area A of the Clinton P. Anderson Los Alamos Meson Physics Facility with Virginia Ortiz y Pino, cooperative education program director at New Mexico Highlands University, and Trinidad Gallegos and Jackie Jo Woods, students from Highlands University, who are working in MP-6.

Henry T. Motz
3147 Woodland
Los Alamos, New Mexico

87544

Walter Skallerup, Jr., legal consultant for the Joint Committee on Atomic Energy, discussed energy projects with scientists at the Los Alamos Scientific Laboratory. Included in the discussions was LASL's geothermal energy project, which is being carried on by members of Group Q-22. In foreground are Morton Smith, Q-22 group leader, and Ed Brown, assistant group leader. Next to Skallerup is Glenn Graves of the LASL director's office.

